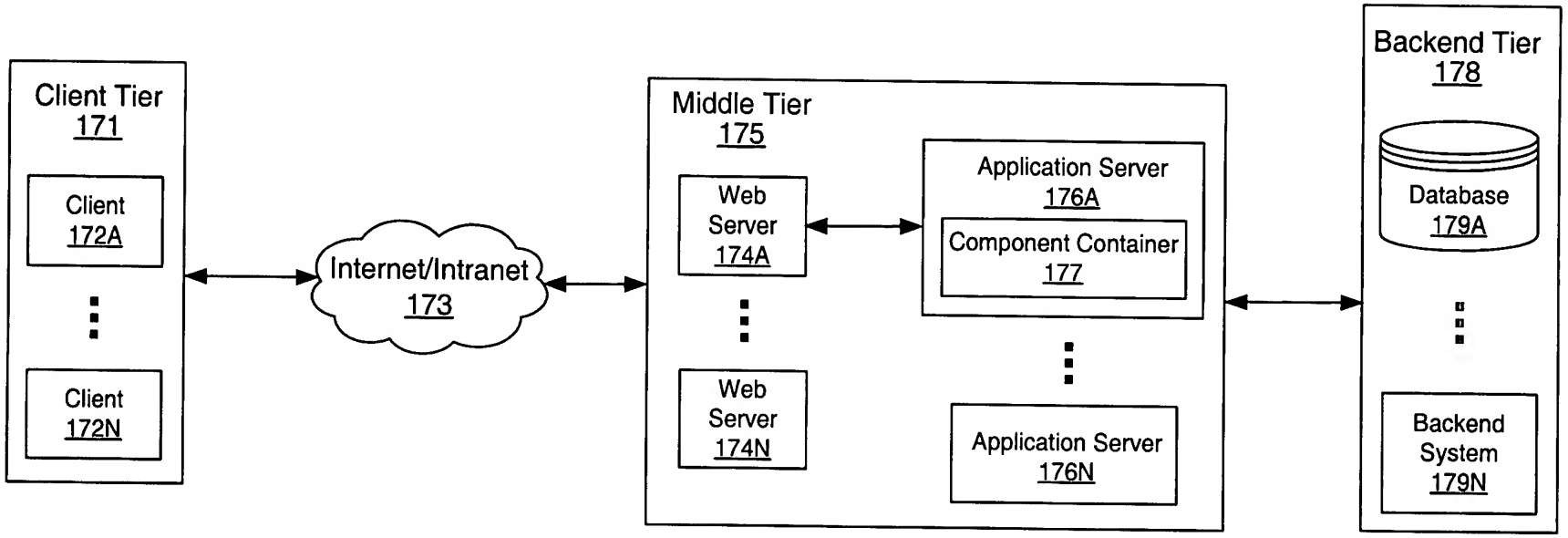
Client Tier
171
Client
172A
Client
172N
Internet/Intranet
173
Middle Tier
175
Web
Server
174A
Web
Server
174N
Application Server
176A
Component Container
177
Application Server
176N
Backend Tier
178
Database
179A
Backend
System
179N

FIG. 1

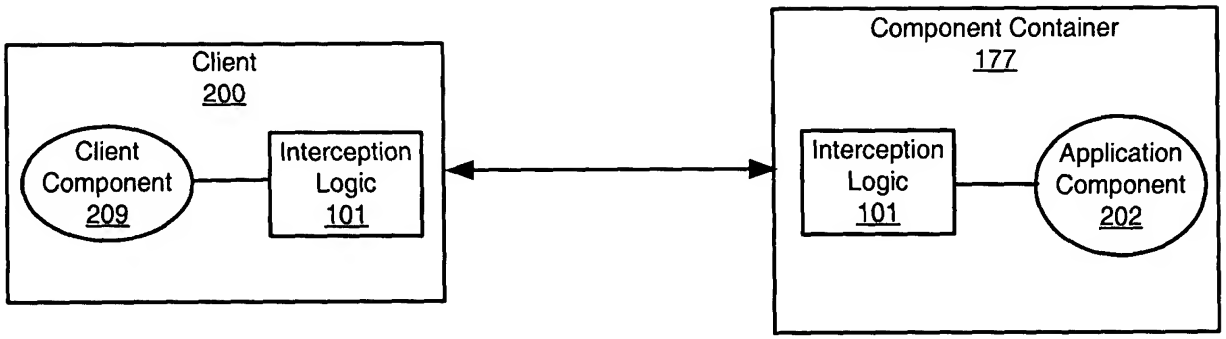
Client
200
Client Component
209
Interception Logic
101
Component Container
177
Interception Logic
101
Application Component
202

FIG. 2

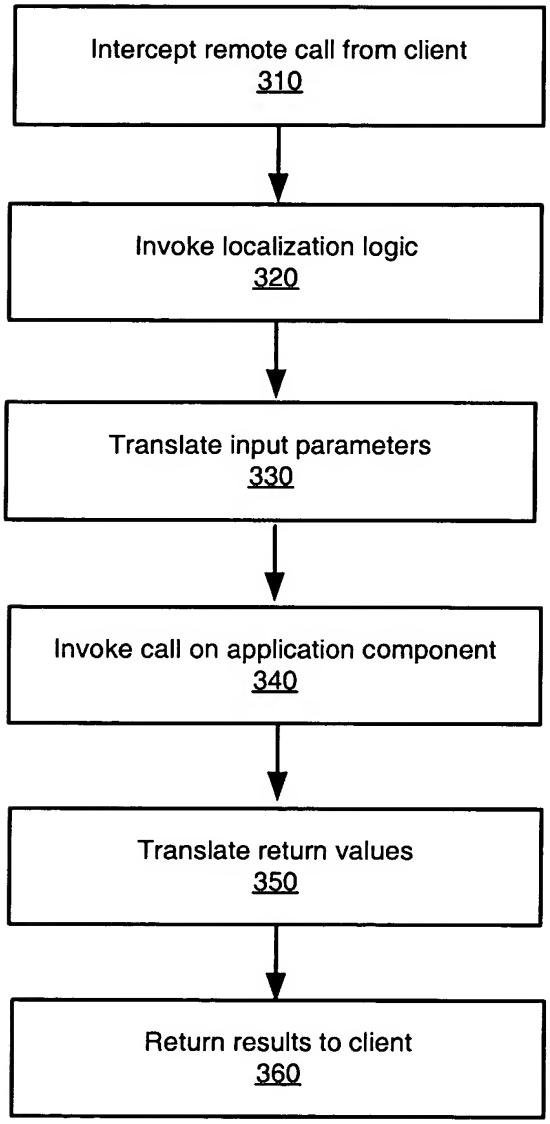
Intercept remote call from client
310
Invoke localization logic
320
Translate input parameters
330
Invoke call on application component
340
Translate return values
350
Return results to client
360

FIG. 3

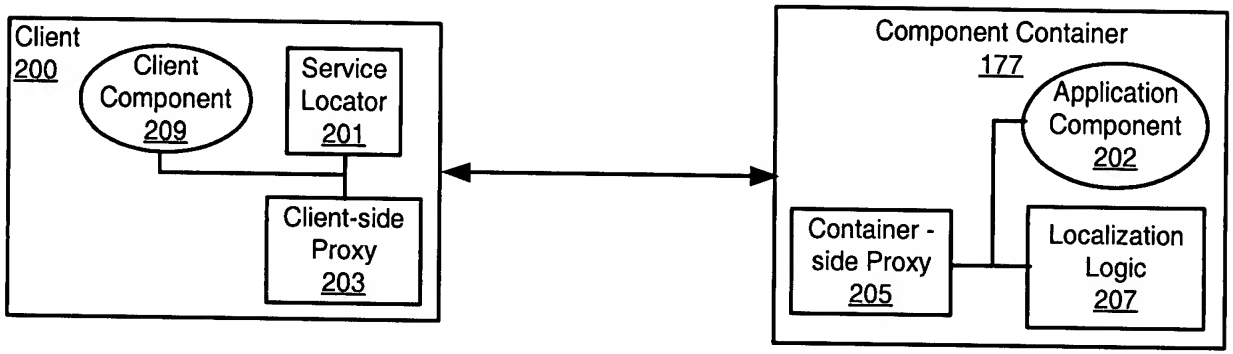
Client
200
Client Component
209
Service Locator
201
Client-side Proxy
203
Component Container
177
Application Component
202
Container - side Proxy
205
Localization Logic
207

FIG. 4

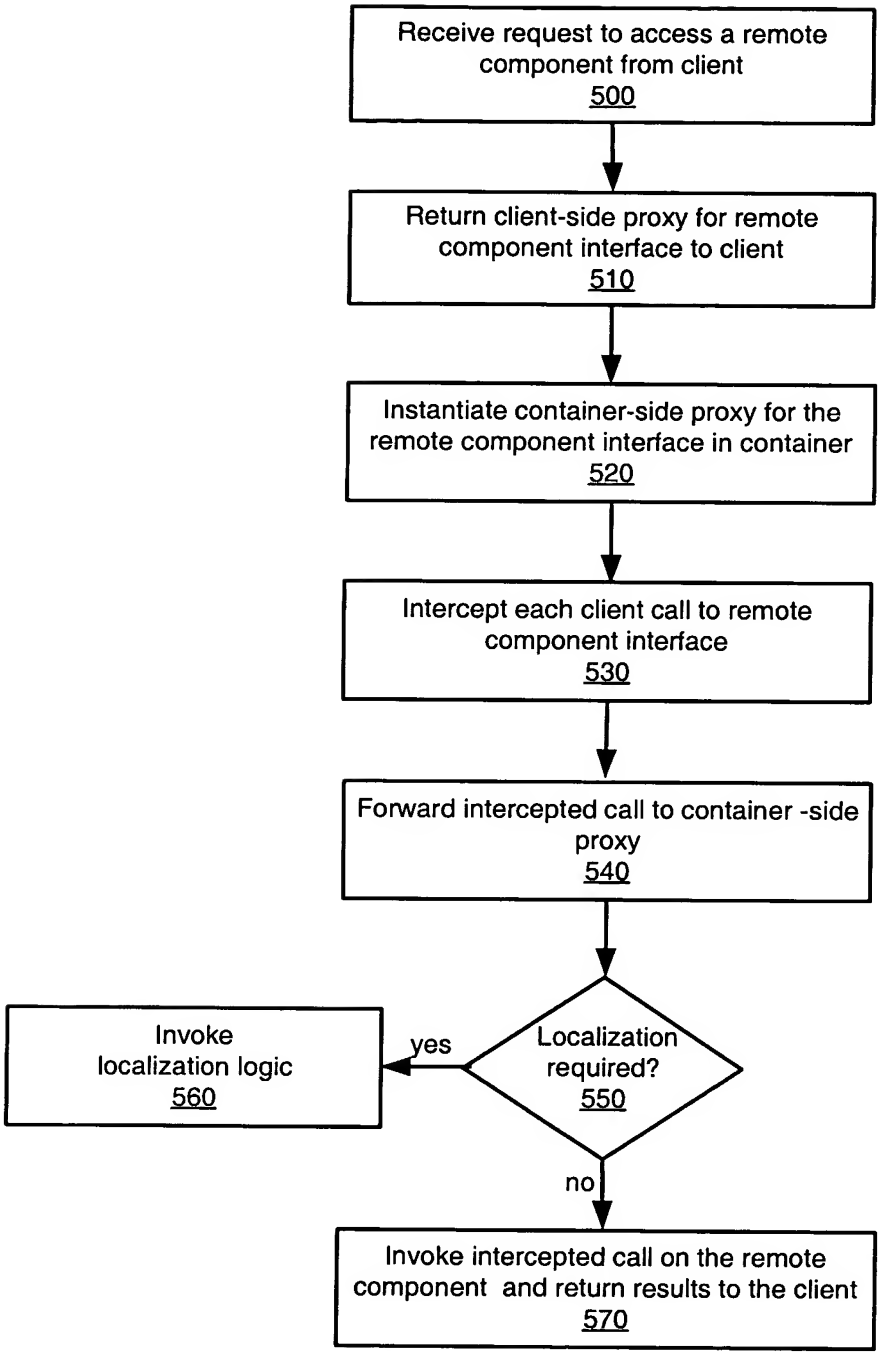
Receive request to access a remote component from client
500
Return client-side proxy for remote component interface to client
510
Instantiate container-side proxy for the remote component interface in container
520
Intercept each client call to remote component interface
530
Forward intercepted call to container -side proxy
540
Localization required?
550
yes
Invoke localization logic
560
no
Invoke intercepted call on the remote component and return results to the client
570

FIG. 5

600

t_organization							
Object_id	Title	Description	...	Email	Code	...	...
Org1	OrgTitleEnglish	OrgDescFrench	...	a@org1.com	123	...	...
Org2			...	b@org2.com	456	...	...

605 610 615 620 625

650

t_organization_locale			
Object_id	Locale_id	Title	Description
Org1	En_US	OrgTitleEnglish	OrgDescEnglish
Org1	Fr_FR	OrgTitleFrench	OrgDescFrench
Org1	De_AT	OrgTitleGerman	OrgDescGerman
Org2	Fr_FR	OrgTitleFrench	OrgDescFrench
Org2	ko_KR	OrgTitleKorean	OrgDescKorean

655 660 665 670

FIG. 6

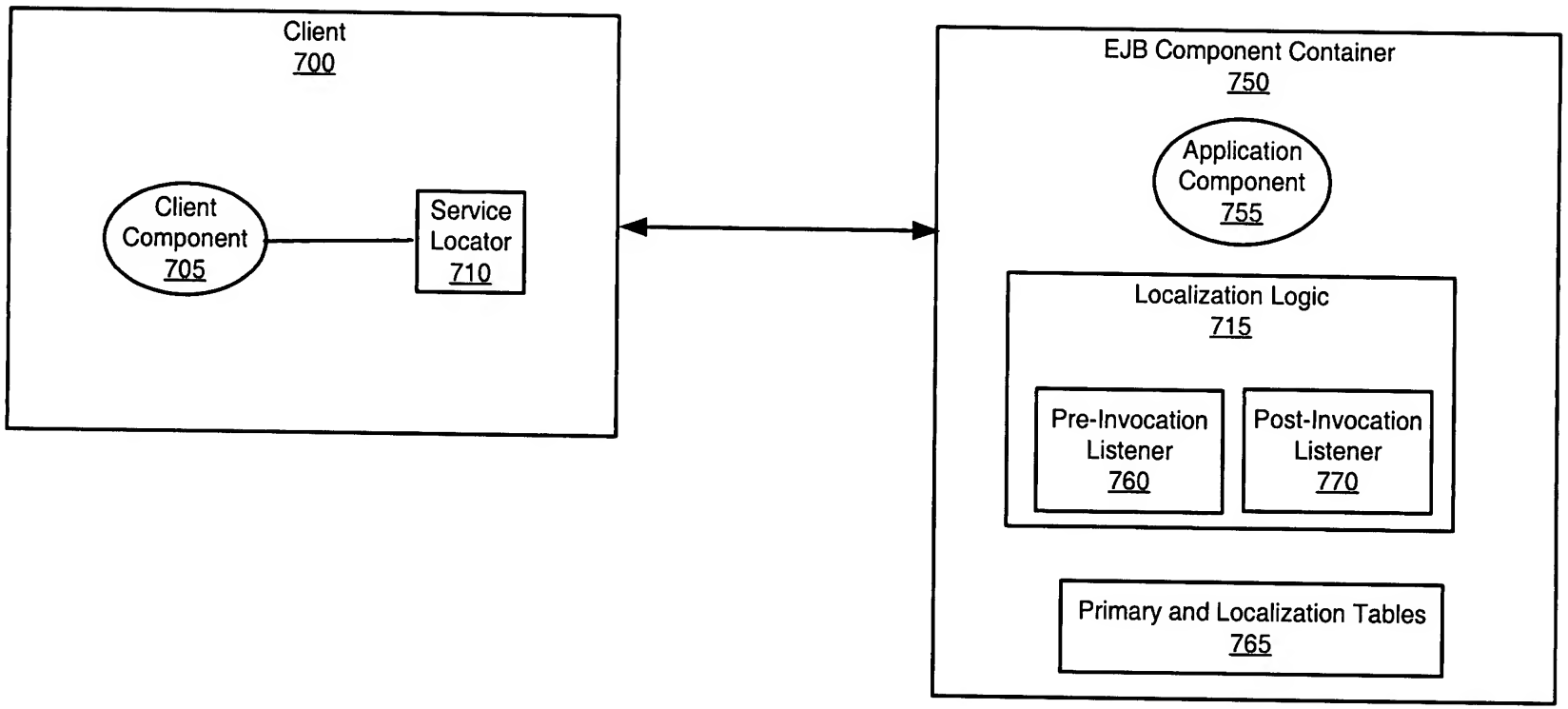
Client
700
Client Component
705
Service Locator
710
EJB Component Container
750
Application Component
755
Localization Logic
715
Pre-Invocation Listener
760
Post-Invocation Listener
770
Primary and Localization Tables
765

FIG. 7

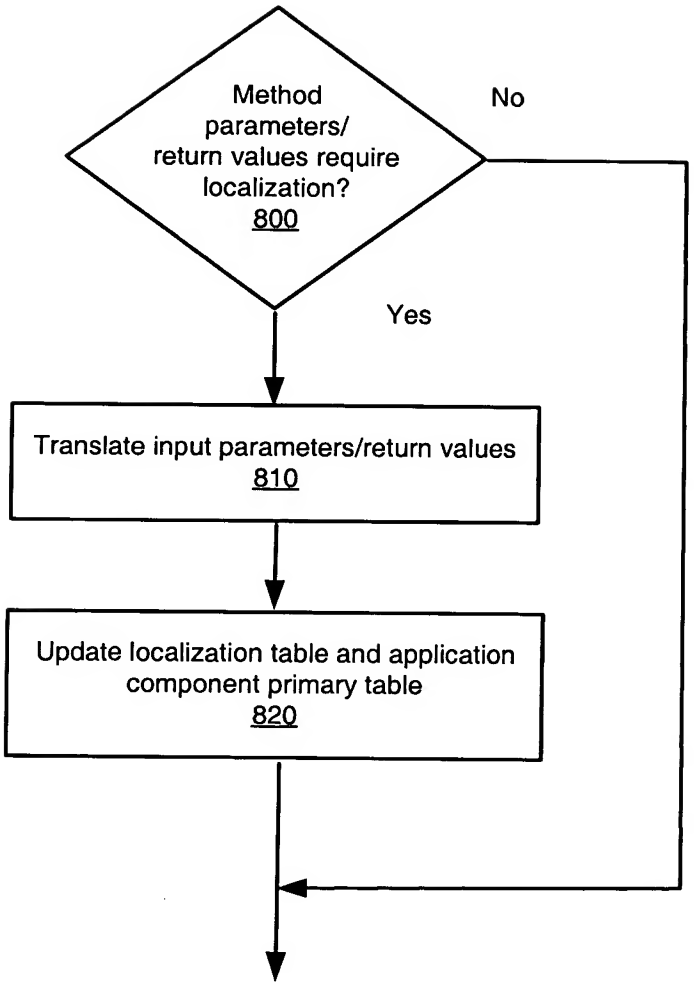
Method parameters/ return values require localization?
800
No
Yes
Translate input parameters/return values
810
Update localization table and application component primary table
820

FIG. 8

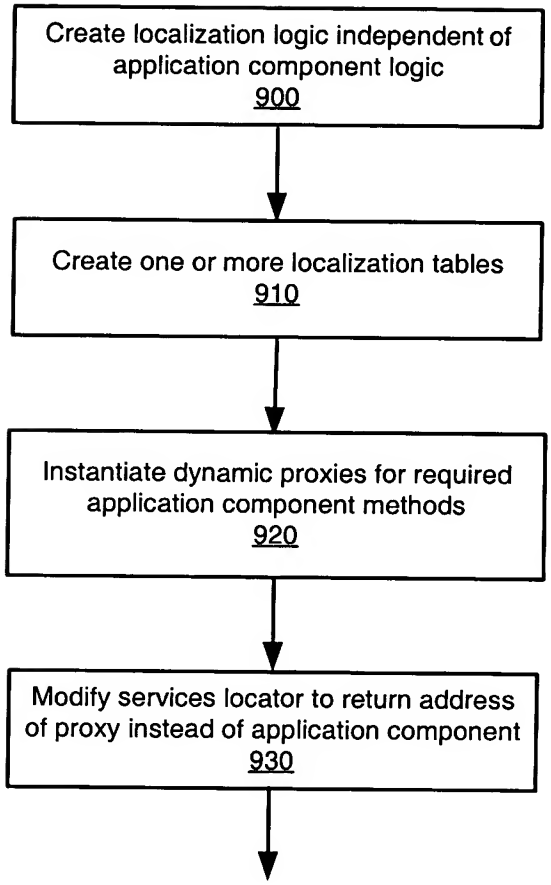
Create localization logic independent of application component logic
900
Create one or more localization tables
910
Instantiate dynamic proxies for required application component methods
920
Modify services locator to return address of proxy instead of application component
930

FIG. 9

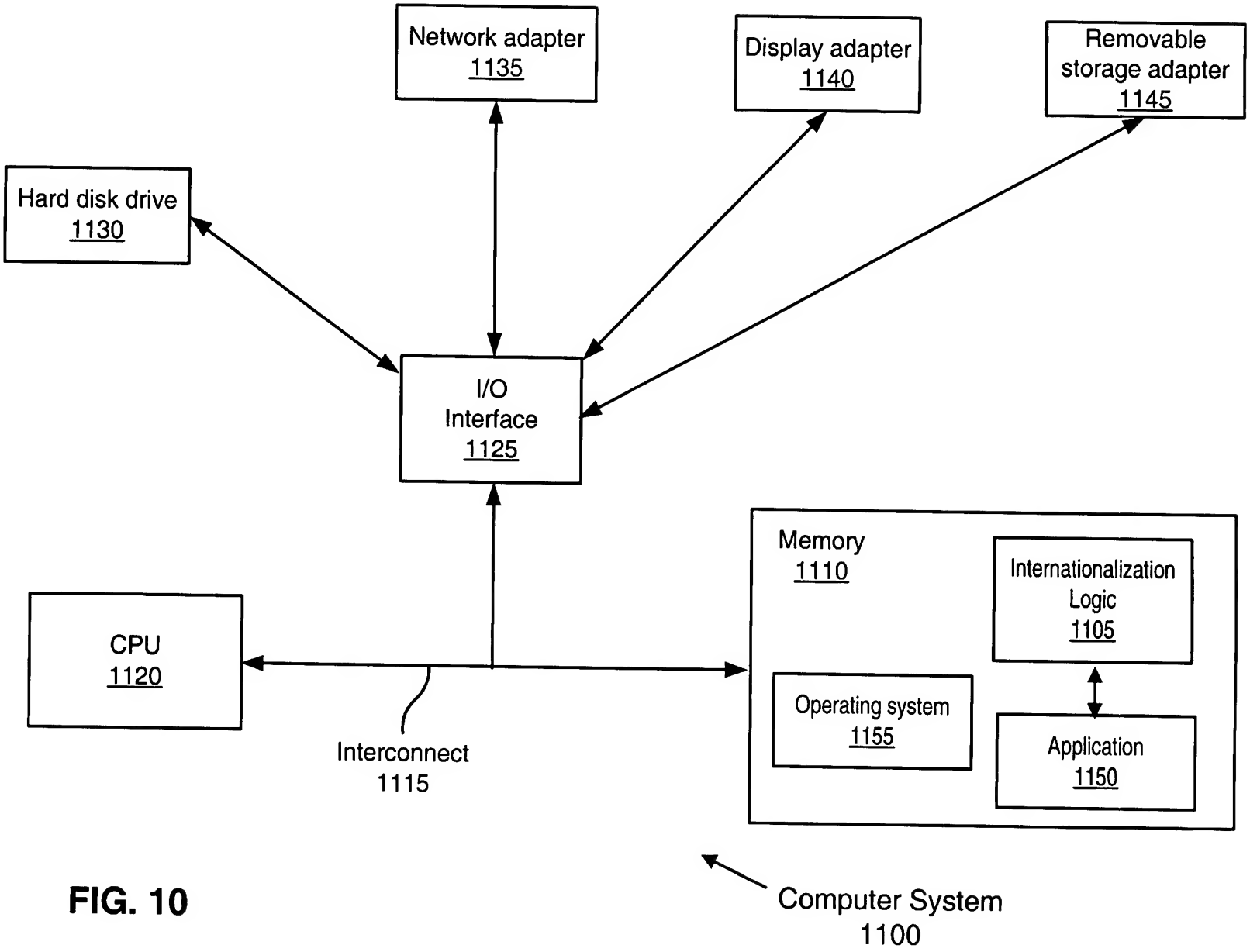
Network adapter
1135
Display adapter
1140
Removable
storage adapter
1145
Hard disk drive
1130
I/O
Interface
1125
Memory
1110
Internationalization
Logic
1105
CPU
1120
Operating system
1155
Application
1150
Interconnect
1115
Computer System
1100

FIG. 10